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TRANSMITTAL FORM

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Application Number	10/720,485
Filing Date	November 25, 2003
First Named Inventor	Robert Weger
Art Unit	2832
Examiner Name	Tuyen T. Nguyen
Attorney Docket Number	BOE01 040

Total Number of Pages in This Submission

ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR 1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
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Request for Reconsideration

Remarks

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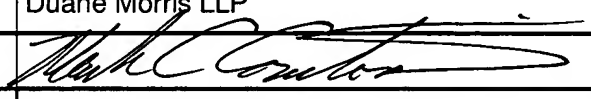
Firm Name	Duane Morris LLP		
Signature			
Printed name	Mark Comtois		
Date	December 16, 2005	Reg. No.	46,285

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ATTORNEY DOCKET NO. BOE01 040

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Patent Application of Robert WEGER

Confirmation No.: 4361

Serial No.: 10/720,485 Art Unit: 2832

Filed: November 25, 2003 Examiner: Tuyen T. Nguyen

Title: COIL ARRANGEMENT WITH VARIABLE INDUCTANCE

Request for Reconsideration

Mail Stop: Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

This is in response to the Advisory Action mailed December 6, 2005, in which the Office refused to enter Applicant's proposed amendment on the ground that Applicant's amendments necessitated additional search and/or consideration. Applicant respectfully requests the Examiner's reconsideration and withdrawal of the Advisory Action.

In the preceding response, Applicant amended claim 1 to include the recitations of dependent claims 3 and 7. In amending claim 1 to include the recitation of claim 3, the limitation "evenly" was excluded. To this end, claim 3 was not cancelled. On the other hand, claim 7 was cancelled as the subject matter claimed therein was incorporated in claim 1.

To the extent that the Examiner has previously searched and considered each of claims 3 and 7 (now cancelled), the incorporation of these claims into claim 1 does not constitute additional or new subject matter nor does it require further search. Accordingly, the Advisory Action should be withdrawn. See, *e.g.*, MPEP 714.13.

In addition, the outstanding rejection should be rejected in its entirety for the reasons stated in Applicant's preceding response and repeated here. Namely, claim 1 recites: "each of said first and said second working windings *wound on its respective toroid core only*." (Emphasis added.)

The reference to Fawcett shows a coil arrangement in which the first and second toroid cores both carry portions of the first and second working windings. In other words, the first working winding is wound around both the first and second toroid core and the second working winding *is wound around both the first and second toroid core*, wherein the first and second working windings *are wound in opposite directions around the toroid cores*. This concept is illustrated in Fawcett's Figs. 1, 5, 6A and 6B. Particularly, Fig. 5 shows that both cores carry parts of both working windings in the same manner as shown in Fig. 1.

Because Fawcett discloses windings wound around both the first and the second toroid cores (as opposed to claim 1 which recites winding on a respective core), Fawcett is not anticipatory.

The obviousness rejection of claim 13 over Fawcett in view of Larikka should also be reconsidered and withdrawn. The claimed invention is directed toward controlling high frequency currents in switching power supplies. In conventional systems, when inductivity is at a minimum due to a DC biasing current, the toroid cores are at a high saturation such that high frequency fields can no longer be accommodated due to a large permeability μ in the core. This

inevitably causes large interference and emission problems. The coil arrangement of Fawcett is used as a switching element for read/write operations of a magnetic drum. Therefore Fawcett does not even relate to the same field of endeavor as Applicant's claimed invention, let alone addressing the problems contemplated by Applicant.

Thus, claims 1 and 13 define three major differences over Fawcett. First, each claimed working winding is wound on its respective core only. Second, the windings of the control winding are distributed over the circumference of both cores. Finally, each working winding is evenly distributed around the periphery of the respective core. (See, *e.g.*, claim 3.) These structural differences provide a number of advantages.

One significant advantage of the claimed structure over Fawcett is the arrangement and distribution of the working windings and the control windings over the entire toroid cores. Only the claimed geometry enables a perfect guidance of the magnetic field within the core while significantly reducing emission. In addition, by distributing the windings over the respective cores, optimum use can be made of the available winding space and losses due to the reduction of core heating. Distributing the control winding on both toroid cores enables an exceptionally even pre-magnetization of the core material. Further, the evenly-wound coil geometry is inherently self-shielding and prevents magnetic stray fields from leaving the toroid cores. Fawcett fails to disclose or discuss any of the above structural features or effects of the claimed invention. Therefore, the differences between the claimed invention and Fawcett are such that the subject matter of the claimed invention could not have been obvious to one of skill in the art based on Fawcett.

The secondary references fail to address these deficiencies.

For example, Larikka alleges a single layer winding evenly distributed around the circumference of a toroid core. However, the reference does not relate to a coil arrangement having a variable inductance as there is neither a control winding nor working windings wound on separate cores. Larikka relates to a choke used for filtering interference that occur in an electric current. Larikka uses the low interference characteristics of a wound toroid core. Larikka does not disclose a variable inductance wherein the inductivity is adjusted using a DC pre-magnetization current in a control winding. Because Larikka describes a completely different coil arrangement having a different effect from that of the present invention, a person of ordinary skill in the art would have no reason to modify the coil of Fawcett in view of Larikka.

For these reasons, independent claims 1 and 13 are deemed patentable over the references and the remaining claims are deemed patentable at least by the virtue of their dependence from claims 1 and 13.

Please reconsider the rejections and allow the application to issue.

While an extension of time is not deemed necessary, the Office is requested and hereby authorized to charge the appropriate extension-of-time fees against Account No. 04-1679 to Duane Morris LLP.

If any point remains that is deemed best resolved through a telephonic conversation, the Office is hereby requested to contact the undersigned directly.

Respectfully Submitted,

Mark C. Comtois	Reg. No. 46,285
D. Joseph English	Reg. No. 42,514
L. Lawton Rogers, III	Reg. No. 24,302
Patrick D. McPherson	Reg. No. 46,255

DUANE MORRIS LLP
1667 K Street, N.W., Suite 700
Washington, DC 20006
Telephone: (202) 776-7800
Facsimile: (202) 776-7801

Dated: December 16, 2005